

AMPLIFIER MODULATION

ABSTRACT

In general, the invention is directed to an efficient amplifier for use in radio-frequency identification (RFID) applications. In particular, the invention provides a highly efficient amplifier that requires little power, yet has significant modulation bandwidth to achieve high data communication rates. The amplifier makes use of many components of a class E amplifier including a first transistor, an inductor coupling the first transistor to a power supply, and a shunt capacitor connected in parallel to the first transistor. A second transistor is connected in parallel to the first transistor. A controller selectively controls the first and second transistors to achieve amplitude modulation at a high modulation bandwidth.